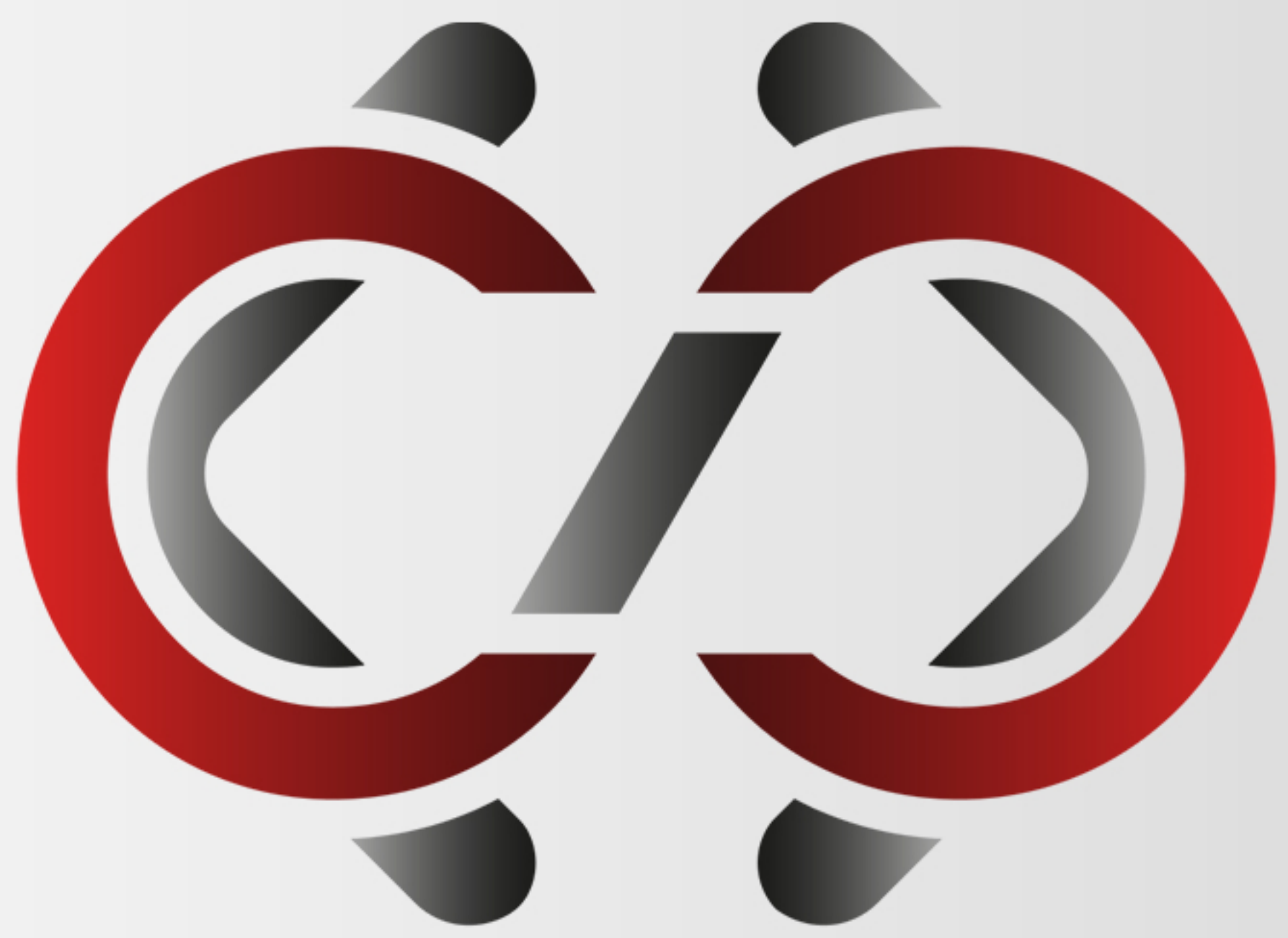




CODE CHALLENGE
CHAMPIONSHIP



Kidcoder

L e v e l 3

H a n d b o o k



Code Challenge Championship



Mission 1

Butterfly's Homeward Flight

Butterfly's Homeward Flight

Overview:

A butterfly is in a hurry to get back home, but her journey is filled with obstacles and walls that she must avoid. The butterfly's movement is influenced by the power of the air, which makes her gradually descend. A developer is needed to create a game that helps the butterfly navigate through these obstacles without hitting them.

Mission:

As a talented programmer, your task is to create this butterfly navigation game.

The game revolves around the following main elements:

1. **Butterfly:** This is the main character, which slowly descends due to the influence of air. The player needs to help the butterfly avoid obstacles by using the **space key to make her jump upwards**.
2. **Walls:** These obstacles appear as vertical walls with small holes that the butterfly must pass through. The walls are created using **clones and respawn every 1.5 minutes at different vertical positions**. They move from the right side of the screen to the left.

For each wall the butterfly successfully avoids, the player earns **1 point**. If the butterfly touches any wall, **the game will stop**.

Useful Hints:

- Use your knowledge of Scratch 3 or PictoBlox to implement this game.
- Use appropriate costumes for the butterfly and walls.
- Implement the jumping mechanic for the butterfly using the space key.
- Use clones to generate new walls at intervals and ensure they respawn at different vertical positions.
- You can see the detailed video for this game from this YouTube link:
<https://youtu.be/uYLePVsC2Ms>

Game Steps:

- **Step 1**

The butterfly will slowly descend due to the power of the air. And the player will use the space key to make the butterfly jump upwards.



- **Step 2**

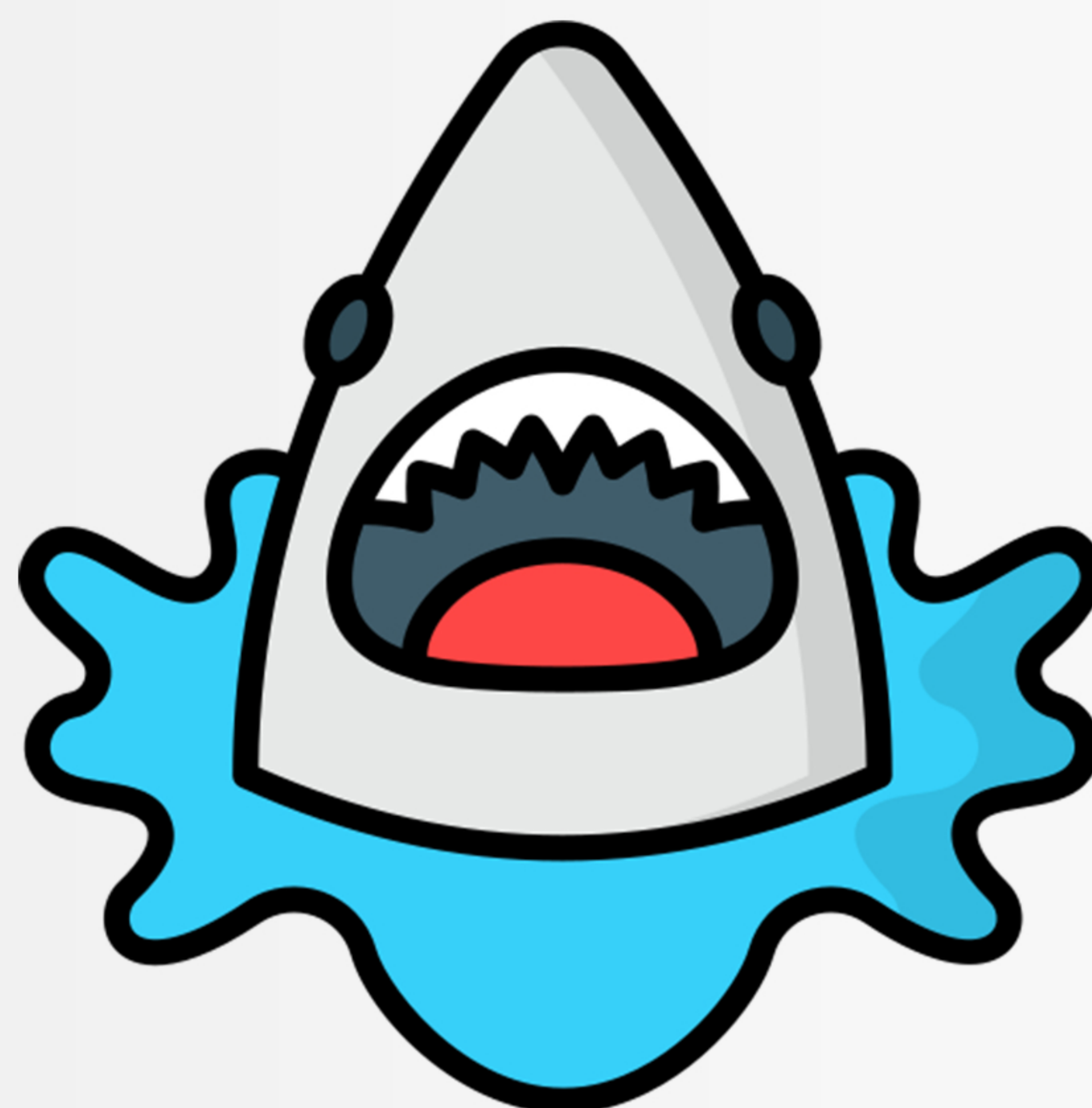
Walls will respawn every 1.5 minutes, moving from the right to the left side of the screen with a small hole in each wall.



- **Step 3**

Each time the butterfly passes through a wall safely, the player earns 1 point. If the butterfly touches a wall, the game will stop.





Mission 2

Shark Attack

Shark Attack

Overview:

The sea is in danger! A warning area is filled with sharks that are attacking fish and sea creatures. Your mission is to create a game that prevents the sharks from attacking. The shark will only be active for 30 seconds, so you must act fast to protect the sea creatures.

Mission:

As a talented programmer, your task is to create this defense game. The game revolves around the following main elements:

1. **Shark:** The shark follows the mouse pointer constantly. By pressing the space key, the player can send a clone of the shark, which will open its mouth, ready to attack the sea creatures trying to escape.
2. **Orange Fish & Octopus:** These sea creatures move from left to right in a loop, trying to avoid the warning area while escaping from the shark.
3. **Blue Fish & Crab:** These sea creatures move from right to left in a loop, also trying to avoid the warning area while escaping from the shark.

The shark will be active for only **30 seconds**, after which it will be eliminated, and all the sea creatures will be set free.

Useful Hints:

- Use your knowledge of Scratch 3 or PictoBlox to implement this game.
- Use appropriate costumes for the shark, orange fish, blue fish, octopus, and crab.
- Implement a timer that starts at 30 seconds and decreases by 1 each second, stopping at 0.
- You can see the detailed video for this game from this YouTube link:

<https://youtu.be/i5luvrV88Go>

Game Steps:

- **Step 1**

The shark is positioned at the center and top of the game.



- **Step 2**

The player controls the shark with the mouse pointer and creates clones by pressing the space key to attack the sea creatures.



Bonus Part:

When the timer reaches 0, the shark will hide, and a message saying **"The shark has been eliminated"** will appear, signaling that all sea creatures are now safe.





Mission 3

Defend the Earth

Defend the Earth

Overview:

The Earth is under attack by evil ladybugs determined to take control. A brave ladybug fighter stands ready to defend the planet from these invaders. As the defender, your mission is to control the fighter, repel the attackers, and protect the Earth at all costs.

Mission:

As a talented programmer, your task is to create this defense game. The game revolves around the following main elements:

1. **Earth:** Positioned at the center of the game, the Earth is the object that must be defended.
2. **Ladybug Fighter:** This is the hero of the game. The player can control the direction of the fighter using the mouse pointer. By pressing the space key, the fighter will create a clone that moves towards the mouse pointer, attacking and destroying the evil ladybugs.
3. **Evil Ladybugs:** These enemies spawn randomly around the Earth and slowly move towards it. If an evil ladybug reaches the Earth, one life is lost.

The player starts with **10 lives**. Each time an evil ladybug touches the Earth, the lives decrease by one. The game ends with a "**Game Over**" message when all lives are lost.

Useful Hints:

- Use your knowledge of Scratch 3 or PictoBlox to implement this game.
- Use appropriate costumes for the ladybug fighter, and the evil ladybugs.
- Implement the clone creation and movement towards the mouse pointer using the space key.
- Randomize the spawning of evil ladybugs and ensure they move towards the Earth.
- You can see the detailed video for this game from this YouTube link:
<https://youtu.be/GWCBwrmK-fs>

Game Steps:

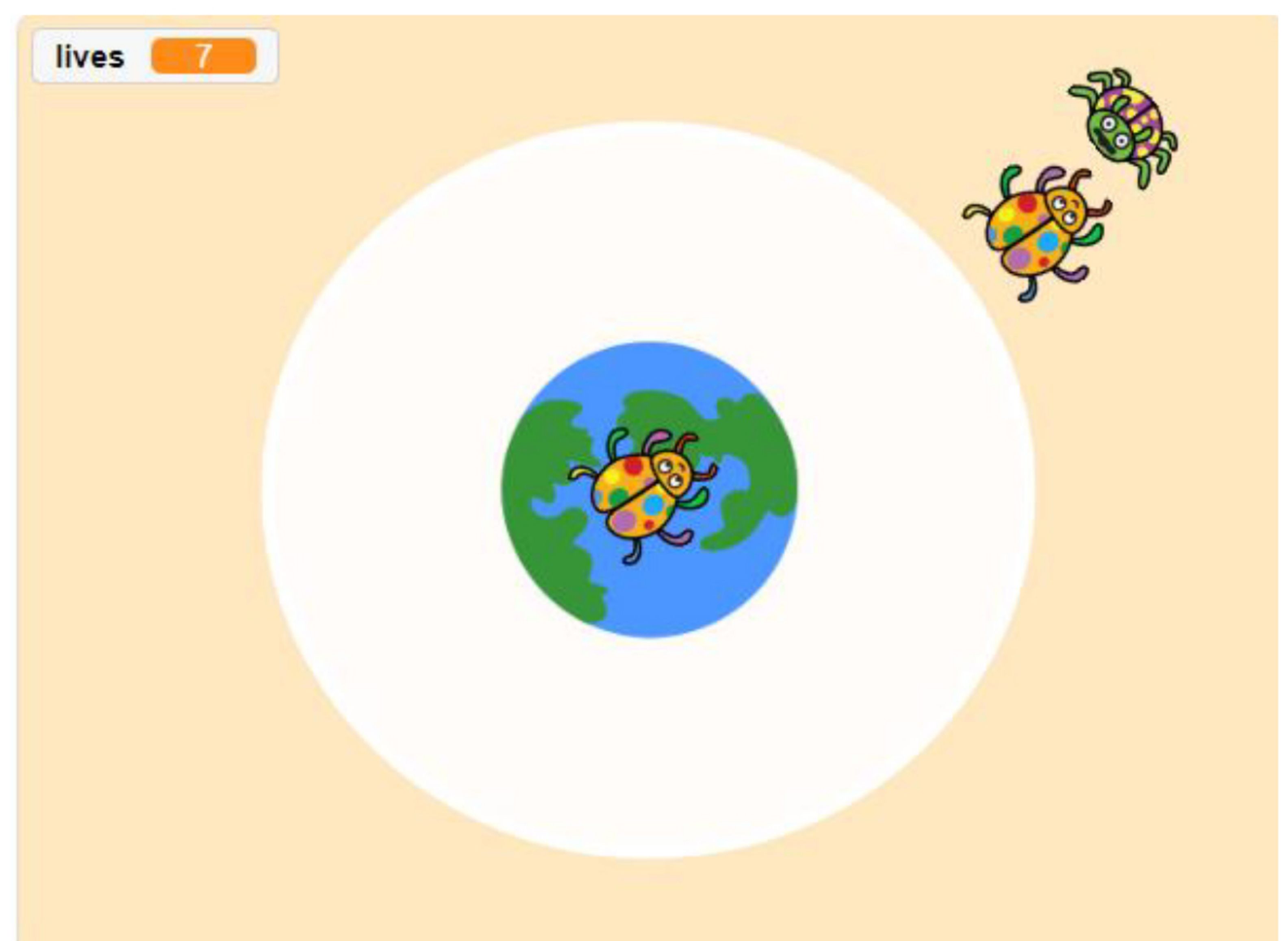
- **Step 1**

The Earth is positioned at the center of the game.



- **Step 2**

The player controls the ladybug fighter with the mouse pointer and creates clones by pressing the space key to attack evil ladybugs. Evil ladybugs spawn randomly around the Earth and move towards it.



- **Step 3**

Each time an evil ladybug reaches the Earth, one life is lost. The game ends with a "Game Over" message when the player's lives reach 0.

